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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/501,392

07/15/2004

Richard Hellberg

4147-78

2794

23117

7590

11/29/2005

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EXAMINER

MOTTOLA, STEVEN J

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EJC

Office Action Summary

Application No.

10/501,392

Applicant(s)

HELLBERG, RICHARD

Examiner

Steven J. Mottola

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-9, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-6 and 10-22 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claims 7-8 & 23-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7 & 23 specify "A Chireix type composite power amplifier...eliminating the need for compensating reactances." However, Chireix amplifiers conventionally use shunt reactances in the output network that would be read on the compensating reactances eliminated in the claim. It is not clear that such a network, without shunt or compensating reactances, should be referenced as a "Chireix" type device since this may be contrary to the commonly accepted meaning. See for instance col. 2, lines 42-51 of Barak et al. (This reference is not relied upon for the rejection but is only cited for the teaching of the commonly accepted meaning of the term "Chireix").

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7,9 & 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Boesch et al.

Refer to fig. 1 of Boesch et al. Treating claim 9 first, a dual band, dual mode power amplifier network is disclosed wherein the parallel amplifiers for 1900 Mhz and 800 Mhz may be read as the composite amplifier claimed driving an output network including matching circuits for 1900 and 800 Mhz bands respectively that may be read as the phase shifting elements claimed; the phase shifts should be different since the

matching requirements at the different frequency bands differ (see col. 2, lines 3-13 of Boesch et al). They are connected to an antenna that may be read as the common load claimed. Further, the output network is driven in a different mode in each band (see col.1, lines 25-65 for instance of Boesch et al). Regarding claim 7, it is assumed the term "Chireix" in the preamble is not properly used as noted above. Then the amplifiers, output network including phase shifting elements and common load may be read on the reference in the same manner as with claim 9 above, further noting that there appear to be no compensating or shunt reactances outside of the matching networks.

Claims 8 & 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boesch et al. in view of Dent et al.

The difference added by this claim is that the phase shifting elements comprise different length transmission lines, whereas Boesch et al. do not disclose a particular structure for the matching circuits of fig. 1. However, it is known from fig. 3 of Dent et al. for instance to use transmission lines for matching parallel amplifier outputs to a common load. It would have been obvious to utilize such lines for the matching circuits of Boesch et al. because in any practical implementation of the device of Boesch et al. a known structure would have to be employed in the absence of any teaching of a particular structure, and Dent et al. teach their use in the context of UHF operation which would include the 800 and 1900 Mhz bands contemplated by Boesch et al. (Although the phase shift of each line shown in Dent et al. is the same, Dent et al. feed the same input signal to each amplifier channel whereas in Boesch et al. different frequency signals are amplified in each channel so that the required phase shift would

differ as noted above requiring different line lengths. Dent et al. is used only for the teaching of using transmission lines as impedance matching elements).


Claims 1-6 & 10-22 are allowed.

The applicant's prior patents cited as Hellberg disclose similar structures and methods as claimed in the allowed claims, but there is not an output component decreasing monotonically above the transition point as required by these claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven J. Mottola whose telephone number is 571-272-1766. The examiner can normally be reached on 571-272-1766 from 8 to 5 . The examiner can also be reached on alternate Fridays from 8 to 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal, can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steven J. Mottola
Primary Examiner